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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,858	10/14/2004	Reza Azadegan	RUN-109-A	6436
7590 10/06/2005			EXAMINER	
Thomas D Helmholdt Young & Basile Suite 624 3001 West Big Beaver Road Troy, MI 48084			HO, TAN	
			ART UNIT	PAPER NUMBER
			2821	
DATE MAILED: 10/06/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/511,858

Applicant(s)

AZADEGAN ET AL.

Examiner

Tan Ho

Art Unit

2821

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 21-23 and 25 is/are rejected.
- 7) ☒ Claim(s) 6 and 8-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**TAN HO**  
**PRIMARY EXAMINER**

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/15/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Bitter, Jr. (US Patent 5,081,466).

Bitter, Jr. discloses, in figure 3, an antenna use in a communication device comprising a substrate 305, a slot dipole line 311 formed on the substrate and having a short circuit and an open circuit, and a coplanar waveguide feed 309 coupled to the slot line.

***Claim Rejections - 35 USC § 103***

3. Claims 1, 4, 7, and 21- 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bitter, Jr.

The patent to Bitter, Jr., described above, differs from the claimed invention because it does not disclose the electrical wavelength, less than quarter wavelength, of the slot line, and the electrical thickness of the substrate, less than one-half wavelength. However, the electrical wavelength and the electrical thickness of the antenna device is considered an obvious matter of design choice depending upon the desired characteristic of the antenna device.

4. Claims 1-3, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US Patent 6,411,181).

Ishikawa et al disclose, in figure 1, a dielectric resonator comprising a dielectric 1, a slot line formed on the dielectric and having a short circuit end and an open circuit. Figure 4 shows a dielectric resonator having 2 spiral slot lines. The patent to Ishikawa et al differs from the claimed invention because it does not disclose the electrical wavelength, less than quarter wavelength, of the slot line. However, the electrical wavelength of the slot line is considered an obvious matter of design choice depending upon the desired characteristics of the antenna device.

5. Claims 1, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winebrand et al (US Patent 6,791,497).

Winebrand et al disclose, in figure 1, an antenna device comprising a dielectric 14, a plurality of slot lines formed on the dielectric, each slot line having a short circuit end and an open circuit, and bent sections. The patent to Winebrand et al differs from the claimed invention because it does not disclose the electrical wavelength, less than quarter wavelength, of the slot line. However, the electrical wavelength of the slot line is considered an obvious matter of design choice depending upon the desired characteristics of the antenna device.

***Allowable Subject Matter***

6. Claim 24 is allowed.

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7. Claims 6, 8-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The patents to Song et al, Oberschmidt et al, Nesic et al, Nurnberger et al, Bonebright et al, and Kunysz are cited as of interest showing the antenna similar to that disclosed.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Ho whose telephone number is (571) 272-1822. The examiner can normally be reached on M-F (8:00AM - 5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
TAN HO  
PRIMARY EXAMINER